Indoor Air Quality Tools for Schools

Indoor Air Quality (IAQ)

IN THIS ISSUE:

NEWS AND EVENTS

- **Green Schools National Conference.** Join 'green minded' school administrators, facility directors, teachers and students at the 3rd Annual Green Schools National Conference, February 22-24, in West Palm Beach, Florida. Hear from *IAQ Tools for Schools* Champions as they share their insights and lessons on maintaining healthy indoor learning environments. Register today and take advantage of the special $25.00 discount on your registration code.
    - Go to https://center.uoregon.edu/conferences/GSNC/2013/registration/
    - Scroll down and click on Register Online
    - Click on Affiliate Rates
    - When asked for a discount code, enter GSNN Partner
- **Virtual School Walkthrough Webinar.** Attend this webinar on February 26, to learn how to identify and solve common indoor air quality (IAQ) problems in your school by conducting school walkthroughs. Register now: https://www2.gotomeeting.com/register/831619602.
- **Healthy Indoor Air for Schools.** Attend this one-day training in Augusta, Maine, on March 12, 2013, to learn what actions New England school districts are taking to create healthy indoor learning environments. The Healthy Indoor Air for Schools program is FREE for representatives from K-12 school districts. Register for the training here: http://www.maineindoorair.org/events/116.

Did You Know …

Each year about 21,000 people die from radon-induced lung cancer.

Nearly one in 15 homes in the U.S. is estimated to have elevated levels of radon. Elevated levels of radon have been found in homes in every state. No area of the country is free from risk.

Interested in learning more about radon in schools? Check out EPA's webinar on how to test for and mitigate radon in schools: http://www.epa.gov/iaq/schools/webconferences.html. Click on 2012 and 2011 tabs to review past technical radon webinars.

Access Previous Connector E-Newsletters Online

Can't find a previous *IAQ Tools for Schools* Connector e-newsletter in your email inbox? No problem! Visit the e-newsletter archive on the *IAQ Tools for Schools* website to access printable versions (PDFs) of all past editions.

- **National Radon Poster Contest.** Check out the 2012 winners of the National Radon Poster Contest. Students ages 9-14 competitively designed posters that raise awareness about the dangers of radon and the importance of testing homes. To see the award winning posters, go to: http://sosradon.org/poster-contest/2013-poster-contest-winners.

To learn more about upcoming events for school stakeholders, visit our Calendar of Events site to determine if there is an event near you.

RADON MANAGEMENT IN SCHOOLS: WHAT YOU NEED TO KNOW TO KEEP STUDENTS AND STAFF SAFE

What is radon, and why is it dangerous?

Radon—a colorless, odorless, radioactive gas—is one of the most hazardous indoor pollutants. Radon is the leading cause of lung cancer among non-smokers. In the U.S., an estimated 21,000 people die from radon-induced lung cancer annually. Thousands of classrooms nationwide have elevated radon levels, needlessly exposing thousands of students and staff to this serious health risk. Testing all frequently occupied rooms that have contact with the ground, we can identify and fix schoolrooms with elevated radon levels.

How does radon get into the school?

Radon gas is present in the soil and enters buildings from underground, through cracks and openings in the foundation. Air pressure inside a building is sometimes lower than pressure in the soil under the foundation. Because of this difference in pressure, a building acts like a vacuum, drawing radon inside from the soil. Typical entry points include joints where the floor meets the wall, expansion joints in the floor, openings in the floor for pipes and wires, and hollow masonry walls that penetrate the floor.

What can I do to protect my students and staff from radon?

Follow EPA's guidance on radon testing, results interpretation and mitigation in schools. Test your school for radon. It's easy and inexpensive. Fix your school if you have a radon level of 4 pCi/L or more. http://www.epa.gov/iaq/schools/tfs/guideg.html

Frequently Asked Questions

I've tested for radon and the results are over 4 pCi/L, what do I do next?

Start with your state radon contact. You need to determine what best course of action to take for your mitigation. Some states "regulate" or "qualify" providers of radon measurement and mitigation services by requiring registration, certification, or licensing; some issue identification cards. Your state can provide you with more information. To date, the following states have some form of radon requirements for radon service providers (CA, DE, FL, IL, IN, IA, KY, ME, NE, NJ, OH, PA, RI, VA and WV). Visit http://www.epa.gov/radon/whereyoulive.html to find radon professional resources in your state.

Find answers to these and other questions on the Schools IAQ Connector Email Discussion List. **Join today** by sending a blank email message to schools_iaq_connector-subscribe@lists.epa.gov. Then check your email inbox for confirmation and membership details.

HOW TO INCLUDE RADON IN YOUR IAQ MANAGEMENT PROGRAM

The *IAQ Tools for Schools* Key Drivers are useful for learning how to incorporate radon in your current IAQ management program. Some tips include: http://www.epa.gov/iaq/schools/pdfs/kit/managing_radon.pdf.

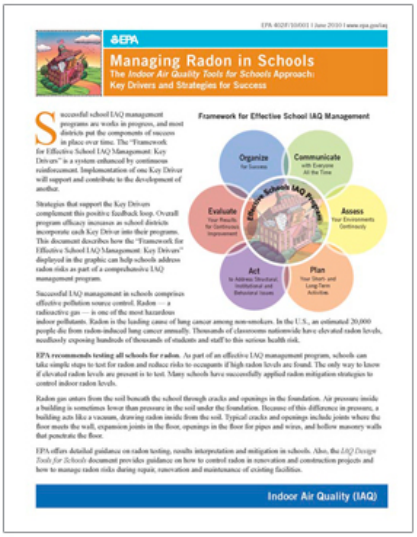
- **Organize:** Use the *IAQ Tools for Schools* Action Kit to tie your goals for radon testing to your overarching IAQ, health and environmental program goals. Coordinate this effort with existing IAQ management program activities.

- **Communicate:** Include radon awareness as part of your overall IAQ management training and education efforts. Encourage parents and staff to test their homes, as the home can be a significant source of radon exposure.
- **Assess:** Perform radon assessment in conjunction with your regular IAQ walkthroughs.
- **Act:** Test according to your IAQ management plan. EPA suggests initial short-term testing in all frequently-occupied, ground contact rooms.
- **Plan:** Working with your IAQ team, identify your action steps and set a schedule for your awareness raising, testing and mitigation plan.
- **Evaluate:** Determine additional testing needs and follow-up. Retest according to plan to ensure radon mitigation systems are functioning properly.

RADON MEASUREMENT AND MITIGATION STANDARDS OF PRACTICE FOR SCHOOLS

By Jani Palmer, U.S. EPA

In the last two years, industry, government and states have been working hard to produce the first consensus-based industry standards of practice to address radon measurement and mitigation in schools. We are excited to share that these standards will be available soon. The two standards being developed: Radon Measurement in Schools and Large Buildings and Radon Mitigation in Schools and Large Buildings.



Background

A standard is an agreed way of doing something. More specifically, it is a published specification that establishes a common language, and contains a technical specification or other precise criteria and is designed to be used consistently, as a rule, a guideline, or a definition. Standards are written by professionals and experts, drawn from the latest scientific data and developed through a consensus process.

Whether we are hiring a plumber to fix our sink or a mechanic to change the oil in our car, we expect them to follow a certain set of best practices. When the standard is not met, quality often suffers. School facility professionals are aware of and commonly follow standards such as ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality, and many of the standard test methods put forth by the American Society of Testing and Materials (ASTM).

Standards are designed for voluntary use and do not impose any regulations. However, laws and regulations may refer to certain Standards making compliance with them compulsory.

The Process

State and federal agencies, industry and the public have identified the critical need to establish standards of practice and codes for a range of technical components related to radon measurement, mitigation, and new construction. Current radon standards include American National Standards Institute (ANSI) N42.50, ASTM 2121, E1465.

The American Association of Radon Scientists and Technologists (AARST) Consortium on National Radon Standards produces many of today's radon standards according to the ANSI accredited process. In any given

week, groups of dedicated radon professionals meet to edit, vet and prepare draft radon standards for public review and comment for promulgation as national standards of practice. Typically, standards can take as many as two to five years from start to finish; however, the committees for the two schools standards under development have remained committed to addressing the critical need for radon standards in schools and are on track to complete these standards in less than two years. The committees expect to have a completed document for public review within the next few months. Visit AARST http://www.aarst.org/consortium_radon_standard.shtml to learn more about the radon standards for measurement and mitigation in schools and how you can participate in setting or using these new radon standards.

Current Guidance Offered by EPA

We know that school districts pay special attention to ensuring that the professionals they hire are committed to quality and the safety of students and staff. When it comes to IAQ, schools are faced with the challenge of saving money and protecting health. Standards of practice can help meet this challenge by providing the basis for quality work.

A practical first step for schools to take to protect occupants from radon is to refer to the *IAQ Tools for Schools* Framework in EPA's Managing Radon in Schools document found here. This document is a good primer to get you ready for addressing radon in your school or school district. You will see that radon testing and mitigation can be a straightforward and organized process. Now that you are primed and ready to take action on radon, you may want to hire a professional to test your school. Logically, you may wonder if there is a standard of practice to which your professional should adhere.

Currently, radon and school building professionals rely upon documents produced by EPA, such as Radon Measurement in Schools, published in 1993 and *Reducing Radon in Schools: A Team Approach*, published in 1994.

Soon, school facility managers and radon professionals will have two consensus-based standards to help them increase the reliability and the effectiveness of radon measurement in schools and radon mitigation in schools. Look for updates in future Connector e-bulletins.

GET ANSWERS TO YOUR QUESTIONS

Is there a topic you want to see covered in an *IAQ Tools for Schools* Connector e-newsletter? Do you have suggestions for a webinar or e-newsletter feature, or do you have questions about a specific IAQ topic? If so, send us an email at IAQTfSConnector@cadmusgroup.com.

Share YOUR news and events! Send us information to share with the school IAQ community. It could be featured in the next Connector e-newsletter. Email your news and events to IAQTfSConnector@cadmusgroup.com.

The *IAQ Tools for Schools* guidance is a comprehensive resource designed to help schools maintain a healthy environment in school buildings by identifying, correcting and preventing IAQ problems. Learn more about the *IAQ Tools for Schools* guidance at http://www.epa.gov/iaq/schools.